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ulp Wood as a Cash Crop

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PULP WOOD AS A CASH CROP

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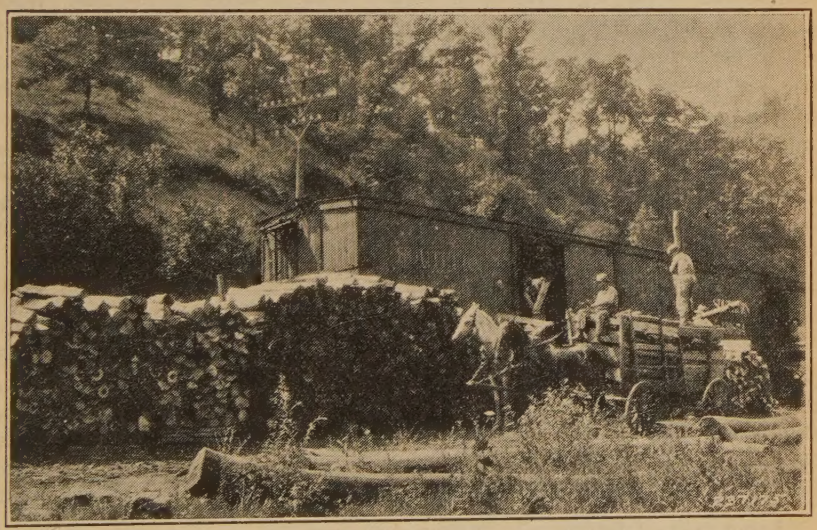
Pulp wood has become a cash crop that pays the labor cost of harvesting and marketing and gives a fair return for the timber stumpage. While people are getting away from the idea of thinking in terms of lumber alone when considering the products of the forest, yet few people realize that in America more than 12,000,000 cords of wood are converted into paper each year. The pulp mills are gradually looking to the South as a source for their raw material and North Carolina is in the path of this movement. Our timber grows rapidly and with proper management should give us a permanent income.

HARVESTING PULP WOOD FITS A FARM PROGRAM

There are four periods for idle farm labor—the winter months, wet season in the spring, after the crop season in summer, and after the harvest in the fall. The harvesting of pulp wood fits well into such a farm program. Wood can be cut and marketed at almost any time when there is



(*Photo by U. S. Forest Service.*)

Poplar wood on way to paper mill, Jackson County, N. C. A pulp wood harvest gives a market for "spare time" labor as well as timber stumpage.

no other important farm work to do. Selling this idle time through timber harvests eliminates necessity for credit and makes possible the economical buying of farm necessities.

Pulp mills in this section are using the pines, yellow poplar, hemlock, spruce, chestnut, and the gums in large quantities. Other trees used but of less importance are: basswood, cucumber, soft maple, and buckeye. The

hardwoods as well as pine are being marketed from the upper Piedmont and mountain sections. There is developing a growing demand in the Piedmont and Coastal Plain region for pine, especially for shortleaf, loblolly, and spruce pine. All of these pines make a good grade of "kraft" paper.

MARKET REQUIREMENTS

Most mills require that pulp wood be cut in 5-foot lengths, though some accept 4-foot and one at least wants it cut in 8-foot lengths. All wood must be 4 inches or more in diameter, sound, with bark peeled off. One or two mills still accept a little "bug-peeled" wood, but there is a growing discrimination against this inferior grade. There is an increasing demand for "green-peeled" wood. If logs are 14 inches or less in diameter they are left round while some mills require that logs of 14 inches, or greater diameter, be split. The wood is usually allowed to dry for two to three months before shipment is made. Each mill supplies definite specifications.

Bark has no value in paper making, therefore all wood must be peeled. Both inner and outer bark must be removed. All knots must be cut smooth with the side of the log and all bark peeled from around the knots and depressions in the log. Burnt or rotten wood is never acceptable. Wood may be peeled during any season of the year, but faster and cleaner work can be done during the period of free sap flow. Tools used in peeling are drawing knives, sharp spades, and even a gooseneck hoe that has been straightened in a blacksmith shop—so as to resemble a spade—and other improvised tools. One North Carolina company manufactures a special peeling tool. For winter peeling, especially with shortleaf pine, the drawing knife is, so far, the most satisfactory tool. For summer work the spade, hoe, or special tool does best work and with certain trees is useful at any season.

COST OF CUTTING AND MARKETING

The cost of getting pulp wood to market, from the producer's standpoint, is divided into two parts: first, the cost of cutting and peeling, or the woods operation; second, the cost of hauling and loading in cars for shipment. Figures presented here are from the standpoint of a farmer operating with his farm labor during the idle seasons. The following figures will be verified by examples of results in succeeding paragraphs:

Labor cost of felling and cutting, per cord	$1.00
Labor cost of peeling and penning, per cord	1.50
Cost of marking and supervision, per cord	.50
Hauling from woods to roadside, per cord	.50
Hauling, an average distance of 5 to 10 miles, and loading in cars, per cord	2.00
Total cost from stump to cars, per cord	$5.50

The net return from stumpage will vary with the cost of production and the selling price. Sale price to farmer is controlled by demand for wood, freight rate from point of origin to mill, size of contract, and whether

(Photo by U. S. Forest Service.)

Kraft paper is made from pine wood. This field of short leaf pine, Burke County, N. C., under a selective cutting harvest would yield 10 to 15 cords of pulp wood and leave a full stand of the better trees for future harvests.

sale is made direct to mill or through a larger contractor. At this time it is not practical to ship wood if more than two railroads are involved in the shipment. The following examples give an idea of operating cost and net return:

Example No. 1.—Sale made direct to mill. Freight rate 10.2 cents per hundred pounds for pine wood. A 100-cord operation.

Selling price, per cord, f.o.b. loading point		$8.00
Cost of felling, cutting, and peeling, per cord	$2.50	
Supervision and marking, per cord	.50	
Hauling from woods to car (1½ miles), per cord	1.50	
Total cost		4.50
Net return from stumpage, per cord		$3.50

(*Photo by U. S. Forest Service.*)

Second-growth yellow poplar in Appalachian Mountains. Not ready for lumber—but in need of thinning. The pulp mill offers a market for this crop. Poplar is used in the manufacture of book paper.

Example No. 2.—Sale made through contractor or middle man. Freight rate 9.7¢ per hundred pounds for pine wood. A 110-cord operation.

Selling price, per cord, f.o.b. loading point		$7.00
Cost of felling, cutting and peeling, per cord	$2.50	
Supervision and marking, per cord	.50	
Hauling from woods to car (average haul 1 mile), per cord	1.15	
Total cost		4.15
Net return from stumpage, per cord		$2.85

Had the sale in case No. 2 been made direct to the mill the farmer would have received an additional $1.00 per cord for his stumpage or a

total of $110.00 on his operation. Both of the above operations were handled on a forest thinning or management basis, the owner marking the trees and supervising the cutting.

METHODS OF HARVEST

The three methods of taking a pulp wood harvest are:

1. Clear cutting—that is, cutting everything as it comes—leaving nothing for future crops, thus throwing the land into idleness. Such a system is seldom advisable.

2. Selective cutting—taking out a tree here and there where it can be spared, and at the same time relieving the crowded condition of a better and more thrifty tree. This system is especially applicable to the mixed hardwoods of the upper Piedmont and mountain sections and certain pine stands beyond the thinning stage.

Pine pulp wood penned to dry. When average wood is cut in 5-foot lengths—six pens 5-foot high are equivalent to one cord (160 cubic feet). This wood was peeled during the winter season with drawing knives.

3. Thinning—taking out the crippled, diseased, overcrowded, and the rougher trees in even-aged stands of pine and poplar especially, leaving a full stand of the largest, straightest, and most vigorous trees for future crops. When this system is followed, the farmer can, with the next crop, meet the demand for lumber, poles, piling, pulp wood, etc. Where clear-cutting is followed, the next crop will always be wood, giving a limited market. Many stands of second growth pine and poplar, where the larger trees are 10 to 12 inches in diameter (breast high) will yield seven to fifteen cords of pulp wood per acre now from thinnings, and leave a full stand of 300 to 400 of the best trees on each acre. The thinnings will pay the taxes for several years and leave a surplus of clear cash.

Here is a report received from a farmer who manages his wooded land so that he derives a cash income from thinnings while the remaining timber gets better and better:

"I am not cutting a single tree that would grow into a lumber tree. I cut a few acres at intervals, taking out only inferior or crowding trees. My net income from these few acres will pay the taxes on the entire tract of nearly 100 acres, for ten years. Besides, the removal of the inferior trees—that I am selling before they become unmarketable—will stimulate greater growth of the best trees, which I am saving to furnish future crops of timber and wood. It is the best illustration of 'eating your cake and keeping it' I know of. I not only have my timber but it grows faster and better when I thin it."

Peeling pine pulp wood with "hoes" during the "Sap Season."

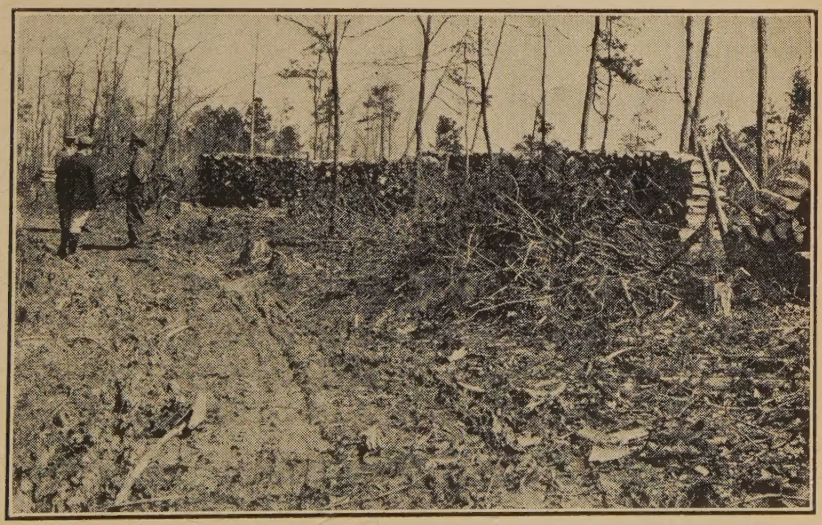
HOW PULP WOOD IS SOLD

Most paper mills buy their supply of wood on contracts. Contracts are made with both individual farmers and timber operators for wood in quantities of 100 cords or more. The one exception to this rule is the mill at Roanoke Rapids, where wood can be delivered in cord lots to the mill. Many of the larger operators make sub-contracts with farmers. Contracts are usually made during the period November to March—and give from 12 to 18 months in which to prepare and deliver the wood. Farmers' mutual exchanges can render a service in aiding the small farmer to get full value of his stumpage by arranging coöperative pulp wood contracts.

Only two mills buying pulp wood are located in North Carolina, but mills in adjoining states, Virginia, Tennessee and South Carolina, are reaching into our forests for a part of their wood supply. While every community in North Carolina is not yet in reach of a market—due to high freight rates or too great a distance—pulp wood can be sold over a large portion of the state. The market at this time is largely confined to the

Taking a pulp wood harvest by thinning pines. Many stands of second-growth shortleaf and loblolly pines will yield 7 to 15 cords per acre from thinnings. This system pays taxes and interest and keeps the land at WORK.

mountains, the Piedmont and the northern portion of the Coastal Plain section. **For information relative to markets in reach of any particular community, consult your County Agent, or write the Extension Forester, N. C. State College, Raleigh.**



(Photo by U. S. Forest Service.)

A "clear-cut"—no future crop—no seed trees left. Land not needed for cultivated crops. North Carolina has 1,500,000 acres of idle crop land—why clear more? KEEP your land growing trees. Compare with scene at top of page.

OPPORTUNITIES FOR PAPER MILLS

North Carolina affords many opportunities for the establishment of paper mills within her borders. We have an abundance of second-growth timber suitable for paper. The timber-growing sections are well supplied with railroads and highways making the timber crop easily accessible to points where mills could be established. Plenty of water and water power available. Farmers handling their timber on a cropping basis can produce a permanent supply of wood.

SUMMARY

1. America uses more than 12,000,000 cords of wood annually to supply her paper requirements.
2. Pulp wood is now a cash crop in North Carolina.
3. Selling idle labor through a timber harvest puts the farmer on a cash basis.
4. A pulp wood crop pays cash for spare labor—plus a fair return for stumpage.
5. More than 20 species of North Carolina trees are used in paper-making.
6. Wood 4 inches in diameter and above is merchantable as pulp wood.
7. "Green-peeled" wood is preferred.
8. Wood may be peeled at any season of the year—but spring and summer best.
9. The spade, hoe, drawing knife, etc., are used as peeling tools.
10. Freight rate and method of sale control the net stumpage return.
11. Clear cutting—a destructive harvest method.
12. Selective cutting or thinning gives an income now and provides for future crops.
13. Timber thinning pays taxes.
14. Pulp wood is sold under a contract plan.
15. Farmers may coöperate in wood sales.
16. Markets available—see page 9.